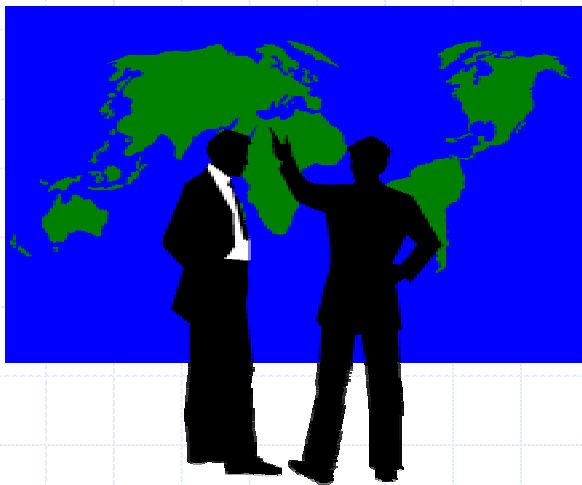




U.S. Department of Energy

OAK RIDGE NATIONAL LABORATORY

CHP Subcontractors Coordination Review Meeting



CHP Deployment in the Pacific Northwest

(ORNL Subcontract No. 4000021765)

April 22, 2004
Oak Ridge National Laboratory's
Washington D.C. Office

Team

- Energy International
 - Rick Tidball (425 736 7985; ricktidball@comcast.net)
 - Kevin Smit
 - Jessica Majeski
- Energy and Environmental Analysis
 - Bruce Hedman
 - Ken Darrow

Project Background

- Historical Perspective of Pacific NW
 - Moderate demand for electricity and heat
 - Low electricity prices (hydroelectric power)
 - CHP concentrated in industrial segment
- Energy Concerns are Changing in PNW
 - Electricity demand is outgrowing supply
 - Energy prices (both gas and electric) are rising
 - Environmental issues are important
- CHP can Address Concerns, but Barriers Exist
- Goal of this DOE Project is to Reduce Barriers by Raising Awareness of CHP in PNW

Objective and Tasks

- Objective

- Increase Awareness and Deployment of CHP in Four Pacific Northwest States

- Alaska
 - Idaho
 - Oregon
 - Washington

- Tasks

- 1 – Market Assessment
 - 2 – Resource Development
 - 3 – Awareness Campaign

Progress in FY03 (Oct 02 – Sep 03)

- Focus was Market Assessment (Task 1)
 - Three reports completed
 - Baseline of existing CHP
 - Technical potential
 - Hurdles for CHP
 - Fourth report underway
 - Economic potential
- Started Resource Development (Task 2)
 - Web site planning and design
 - Calculator development
- Five Subtask Reports and Excel Calculator Delivered to ORNL

CHP Baseline Subtask Report (Task 1)

- 146 active CHP sites in 4 states (3.8 GW)
- Oregon has largest fraction (58%, 2.2 GW)
- Of the 4 states, Alaska has the largest number of CHP installations (82)
- CHP concentrated in industrial market segment in PNW

Technical Potential Subtask Report (Task 1)

- By 2022, 15.5 GW of additional CHP is technically feasible
- State breakdown
 - 50% WA
 - 33% OR
- Market segment breakdown
 - 2/3 commercial
 - 1/3 industrial
- ***Preliminary*** economic potential estimates
 - 21% of 15.5 GW (3.2 GW) estimated to be high
 - 5% moderate
 - 74% low

Resource Development Results (Task 2)

- Web site
 - Developed preliminary design for Pacific NW CHP web site
 - Coordinated development with Washington State University (WSU) Energy Program and DOE SRO
 - WSU EP to host site
 - EI to develop content and assist with review
- Calculator
 - Reviewed CHP Resource Guide and other references to identify existing tools – goal was to start with an existing tool rather than develop a new application
 - Evaluated 8 existing CHP calculation tools with following criteria
 - Ease of use
 - Transparent methodology
 - Meaningful results for screening purposes (not intended to be a detailed analysis or engineering design tool)
 - Chose to customize Excel spreadsheet developed by Midwest CHP Application Center
 - Customized for Pacific NW
 - Upgraded features and functionality

Coordination with CHP Stakeholders

- DOE Seattle Regional Office
 - Chuck Collins
 - Hosted CHP workshops (formal and informal)
 - Established CHP Pacific Northwest Initiative
 - Organized PNW CHP Roundtable (Jun 03)
- Washington State University (WSU) Energy Program
 - Dave Sjoding, Gordon Bloomquist
 - Awarded DOE SEP grant for NW CHP Application Center
 - Close coordination on web site development
- Midwest CHP Application Center
 - Leslie Farrar
 - CHP calculator development
- Northwest CHP Consortium
 - Chris Galati
 - Consortium managed by NW Natural
 - Installed 30 kW showcase MT; more sites planned

FY04 Plans (Oct 03 – Sep 04)

- Complete Market Assessment (Task 1)
 - Finish Economic Potential subtask report
 - Prepare Task 1 final report (cover all 4 subtasks)
- Continue Resource Development (Task 2)
 - Develop at least one case study for each state
 - Provide WSU EP with content for web site
- Obtain Stakeholder Input for Awareness Campaign (Task 3)
- Continue Participation in Regional CHP Activities
 - CHP PNW Initiative meetings
 - Coordination with NW CHP Application Center
 - NW CHP Consortium
 - Guidance from DOE SRO

Timeline (calendar year)

	2003			2004				2005		
Tasks	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
1. Market Assessment										
2. Resource Development										
3. CHP Awareness Campaign										
Deliverables										
Kick-Off Meeting at EI	•									
CHP Contractor Meeting at ORNL	•				•					
Market Assessment Report			•							
Web Content/Case Studies							•			
Awareness Workshops								•	•	•
Project Review Meetings			•				•			•

Questions?

